

REMARKS

Applicant submits this Amendment, accompanied by an Appendix to Amendment Dated February 25, 2002, a Supplemental Information Disclosure Statement Under 37 C.F.R. § 1.97(c), and a Petition for Extension of Time, in response to the Office Action mailed August 24, 2001.

In the Office Action, the Examiner rejected claims 43-60 under 35 U.S.C. § 112, ¶ 2; rejected claims 43, 59, and 60 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,419,384 to Iseki ("Iseki") or U.S. Patent No. 3,826,297 to Alderfer ("Alderfer"); rejected claims 43-49 and 56-60 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 3,240,250 to Frazier ("Frazier"); rejected claims 52-55 under 35 U.S.C. § 103(a) as being unpatentable over Frazier; rejected claims 43, 48, and 50-60 under 35 U.S.C. § 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over European Patent Application No. 0,928,702 ("EP '702"); provisionally rejected claims 43, 48, and 50-60 under 35 U.S.C. § 102(e) as being anticipated by copending U.S. Patent Application No. 09/221,603, now U.S. Patent No. 6,328,084 ("the '084 patent"); and provisionally rejected claims 43, 48, and 50-60 under 35 U.S.C. § 103(a) as being obvious over the '084 patent.

In this Amendment, Applicant amends the title. Additionally, Applicant cancels, without prejudice or disclaimer, claims 31-42. Further, Applicant amends claims 43, 59, and 60 in response to the rejections under 35 U.S.C. § 112, ¶ 2. Finally, Applicant amends claims 43, 44, 46, 47, and 59 to improve clarity.

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No claim amendments are made in response to the rejections under 35 U.S.C. § 102(a), 35 U.S.C. § 102(b), 35 U.S.C. § 102(e), or 35 U.S.C. § 103(a).

Before entry of this Amendment, claims 31-60 were pending in this application. After entry of this Amendment, claims 43-60 are pending in this application.

The originally-filed specification, claims, abstract, and drawings fully support the amendment to the title and the amendments to claims 43, 44, 46, 47, 59, and 60. No new matter was introduced.

35 U.S.C. § 112, ¶ 2

To the extent that the phrase “in particular for two-wheeled vehicles” can be read to narrow the language of claims 43-60, Applicant broadens claims 43-60 by amending claims 43, 59, and 60 to delete this phrase.

Independent Claims

Claim 43, as amended, recites a carcass structure for tyres, comprising at least one carcass ply comprising strip sections circumferentially distributed around a geometric rotation axis of the tyre, wherein each strip section comprises at least two thread elements disposed longitudinally and in parallel to each other and at least partly coated with at least one layer of raw elastomer material, and wherein each of the strip sections extends in a substantially U-shaped conformation around a cross-section outline of the carcass structure to define two side portions spaced apart from each other in an axial direction and a crown portion extending at a radially-outer position between the side portions, and a pair of annular reinforcing structures each engaged at areas close to a respective inner circumferential edge of the at least one carcass ply and comprising an annular anchoring insert, substantially in a form of an annulus, disposed

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coaxially with the carcass structure and adjacent to the respective inner circumferential edge of the at least one carcass ply, wherein the annular anchoring insert is formed of at least one elongated element extending in concentric coils, and a filling body of raw elastomer material joined to the annular anchoring insert.

Claim 59, as amended, recites a tyre having a carcass structure made by a method comprising the steps of preparing strip sections each comprising longitudinal and parallel thread elements at least partly coated with at least one layer of raw elastomer material, making at least one carcass ply by laying down and circumferentially distributing the strip sections on a toroidal support, each of the strip sections extending in a U-shaped configuration around a cross-section outline of the toroidal support, to define two side portions mutually spaced apart in an axial direction and a crown portion extending at a radially-outer position between the side portions, and applying annular reinforcing structures to areas close to inner circumferential edges of the at least one carcass ply, wherein formation of each annular reinforcing structure comprises the steps of laying down at least one elongated element in concentric coils to form an annular anchoring insert substantially in a form of an annulus, forming at least one filling body of raw elastomer material, and joining the at least one filling body to the annular anchoring insert.

Annular Anchoring Insert

The independent claims, as amended, recite an annular anchoring insert “substantially in a form of an annulus” and formed of “at least one elongated element extending in concentric coils” or “at least one elongated element in concentric coils.”

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As shown in Figs. 1, 5, and 6, the at least one elongated element extends in an essentially single layer of concentric coils substantially in the form of an annulus that may follow the contour of side portions 13a.

Such an annular anchoring insert is significantly different from prior art tyre beads typically formed of multiple layers of bead wire both in the radial direction and the axial direction. And it is also different from other annular structures using multiple annular inserts.

Iseki

Iseki discloses a pneumatic tire including a carcass ply composed of a plurality of ply strips. (Iseki, Title and Abstract). Iseki does not appear to discuss the construction of annular bead core 5 in detail, but Fig. 2 depicts it as an empty hexagon. (Id., c. 2/ll. 29-39 and Fig. 2).

Thus, Iseki does not disclose at least the annular anchoring insert of the present application, substantially in a form of an annulus . . . wherein the annular anchoring insert is formed of at least one elongated element extending in concentric coils.

Alderfer

Alderfer discloses a radial tire carcass including a pair of bead sections. (Alderfer, Title and Abstract). Alderfer discloses that the annular bead ring of a bead section “may well be of the rectilinear cross-section depicted.” (Id., c. 5/ll. 30-36 and Fig. 3). Other descriptions and figures appear to disclose similar constructions. (Id., c. 8/ll. 41-67, c. 9/ll. 1-17, and Figs. 2, 8, 9, 10, and 12).

Thus, Alderfer does not disclose at least the annular anchoring insert of the present application, substantially in a form of an annulus . . . wherein the annular anchoring insert is formed of at least one elongated element extending in concentric coils.

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Frazier

Frazier discloses a pneumatic tire including bead rings 16 and 17. (Frazier, Title and Figs. 1, 2, and 12). Frazier does not appear to discuss the construction of bead rings 16 and 17 in detail, but Figs. 1 and 12 appear to depict it as having multiple layers of bead wire both in the radial and axial directions. (Id., Figs. 1 and 12).

Thus, Frazier does not disclose at least the annular anchoring insert of the present application, substantially in a form of an annulus . . . wherein the annular anchoring insert is formed of at least one elongated element extending in concentric coils.

EP '702

EP '702 discloses a tyre for vehicle wheels, including annular structures comprising a pair of circumferentially inextensible annular inserts 27 and 28. (EP '702, Title and paragraphs 0088, 0089, and 0091).

Thus, EP '702 does not appear to disclose at least the annular anchoring insert of the present application, substantially in a form of an annulus . . . wherein the annular anchoring insert is formed of at least one elongated element extending in concentric coils.

The '084 Patent

Similarly, the '084 patent discloses a vehicle tire with a particular carcass ply and/or a particular circumferentially inextensible annular structure. (The '084 patent, Title). The inextensible annular structures comprise a pair of circumferentially inextensible annular inserts 27 and 28 (Id., c. 9/l. 52 - c. 10/l. 20).

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Thus, the '084 patent does not appear to disclose at least the annular anchoring insert of the present application, substantially in a form of an annulus . . . wherein the annular anchoring insert is formed of at least one elongated element extending in concentric coils.

Rejections Under 35 U.S.C. § 102—Independent Claims

Applicant submits that independent claims 43 and 59 are patentable under 35 U.S.C. § 102 over the cited references, including Iseki, Alderfer, Frazier, EP '702, the '084 patent, and the other art of record.

For anticipation under 35 U.S.C. § 102, the reference must teach *every* aspect of the claimed invention either explicitly or implicitly. See M.P.E.P. 706.02. However, as discussed above, neither Iseki, Alderfer, Frazier, EP '702, the '084 patent, nor the other art of record discloses at least the annular anchoring insert of the present application, substantially in a form of an annulus . . . wherein the annular anchoring insert is formed of at least one elongated element extending in concentric coils.

Therefore, independent claims 43 and 59 are patentable under 35 U.S.C. § 102 over the cited references, including Iseki, Alderfer, Frazier, EP '702, the '084 patent, and the other art of record.

Rejections Under 35 U.S.C. § 102—Dependent Claims

Applicant submits that dependent claims 44-58 and 60 are patentable under 35 U.S.C. § 102 over the cited references, including Iseki, Alderfer, Frazier, EP '702, the '084 patent, and the other art of record. This is true whether such art is considered alone or in any proper combination, in particular, at least due to the dependency of claims 44-58 and 60 from independent claim 43 or claims dependent from independent claim 43.

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Rejections Under 35 U.S.C. § 103(a)—Independent Claims

Applicant submits that independent claims 43 and 59 are patentable under 35 U.S.C. § 103(a) over the cited references, including Iseki, Alderfer, Frazier, EP '702, the '084 patent, and the other art of record.

To establish a prima facie case of obviousness under 35 U.S.C. § 103(a) using a single reference: (1) there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference; (2) there must be a reasonable expectation of success; and (3) the prior art reference must teach or suggest all the claim limitations. See M.P.E.P. 2143.

However, as discussed above, Iseki, Alderfer, Frazier, EP '702, the '084 patent, and the other art of record do not teach or suggest all the claim limitations of independent claims 43 and 59. Specifically, they do not disclose at least the annular anchoring insert of the present application, substantially in a form of an annulus . . . wherein the annular anchoring insert is formed of at least one elongated element extending in concentric coils.

Therefore, independent claims 43 and 59 are patentable under 35 U.S.C. § 103(a) over the cited references, including Iseki, Alderfer, Frazier, EP '702, the '084 patent, and the other art of record.

Rejections Under 35 U.S.C. § 103(a)—Dependent Claims

Applicant submits that dependent claims 44-58 and 60 are patentable under 35 U.S.C. § 103(a) over the cited references, including Iseki, Alderfer, Frazier, EP '702, the '084 patent, and the other art of record. This is true whether such art is considered alone or in any proper

combination, in particular, at least due to the dependency of claims 44-58 and 60 from independent claim 43 or claims dependent from independent claim 43.

Other Applications

The Information Disclosure Statement filed on October 28, 1999, listed five pending patent applications: (1) U.S. patent application No. 09/198,241; (2) U.S. patent application No. 09/198,242; (3) U.S. patent application No. 09/219,422; (4) U.S. Patent application No. 09/221,603; and (5) U.S. provisional patent application No. 60/118,527.

U.S. patent application No. 09/198,241 was abandoned in favor of continuation patent application No. 09/873,330, filed on June 5, 2001.

U.S. patent application No. 09/198,242 issued as U.S. Patent No. 6,318,432 (Applicant submits a copy of this patent in the Supplemental Information Disclosure Statement Under 37 C.F.R. § 1.97(c) filed with this Amendment). A divisional application, U.S. patent application No. 09/970,221, was filed on October 2, 2001.

U.S. patent application No. 09/219,422 was abandoned in favor of continuation patent application No. 09/840,095, filed on April 24, 2001.

U.S. Patent Application No. 09/221,603 issued as U.S. Patent No. 6,328,084 (Applicant submits a copy of this patent in the Supplemental Information Disclosure Statement Under 37 C.F.R. § 1.97(c) filed with this Amendment). A divisional application, U.S. patent application No. 09/983,671, was filed on October 25, 2001.

U.S. provisional patent application No. 60/118,527 was abandoned in favor of U.S. patent application No. 09/885,092, filed on June 21, 2001 (Applicant submits a copy of this patent

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application in the Supplemental Information Disclosure Statement Under 37 C.F.R. § 1.97(c) filed with this Amendment).

Applicant believes that each of the patents and currently-pending applications discussed in this section represent separately patentable inventions.

Summary

In view of the foregoing amendments and remarks, Applicant respectfully requests the reconsideration and reexamination of this Application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: February 25, 2002

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